



Memo

To: State of Nevada Operator Certification Advisory Board
From: Kevin L. Malone
CC: Geoff DaForno
Date: April 5, 2007
Re: March 2007 Distribution Operator Certification Exam Analysis

The following results are from the March testing cycle which is divided into three regional areas: Northern, Central and Southern Nevada. The exam results were reviewed and an analysis was completed based on the March 14th, 2007 exam scores. For each testing cycle, the intention of each analysis is to provide instructors with feedback on areas of deficiencies identified for the state.

Grade 1 – Distribution

Northern Nevada had the following topics as the most missed on the Grade I Water Distribution Operator Exam:

- ◆ Water Quality
- ◆ Distribution System Operations
- ◆ Pumps & Motors

Central Nevada had the following topics as the most missed on the Grade I Water Distribution Operator Exam:

- ◆ Water Quality
- ◆ Pumps and Motors
- ◆ Distribution System Operation

Southern Nevada had the following topics as the most missed on the Grade I Water Distribution Operator Exam:

- ◆ Water Quality
- ◆ Sources of Supply

- ◆ Safety
- ◆ Pumps & Motors
- ◆ Distribution Mathematics

Grade II – Distribution

Northern Nevada had the following topics as the most missed on the Grade II Water Distribution Operator Exam:

- ◆ Pumps and Motors
- ◆ Water Quality
- ◆ Disinfection

Central Nevada had the following topics as the most missed on the Grade II Water Distribution Operator Exam:

- ◆ There was no topic that was missed more than others. Statistically, they were all the same.

Southern Nevada had the following topics as the most missed on the Grade II Water Distribution Operator Exam:

- ◆ Water Quality
- ◆ Disinfection
- ◆ Safety
- ◆ Pumps & Motors

Grade III – Distribution

Northern Nevada had the following topics as the most missed on the Grade III Water Distribution Operator Exam:

- ◆ There were no examinees for this area for the March 14th, 2007 testing cycle

Central Nevada had the following topics as the most missed on the Grade III Water Distribution Operator Exam:

- ◆ Distribution System Operations
- ◆ Water Quality
- ◆ Safety

Southern Nevada had the following topics as the most missed on the Grade III Water Distribution Operator Exam:

- ◆ Water Quality
- ◆ Distribution System Operations

- ◆ Safety

Grade IV – Distribution

Northern Nevada had the following topics as the most missed on the Grade IV Water Distribution Operator Exam:

- ◆ There were no examinees for this area for the March 14th, 2007 testing cycle

Central Nevada had the following topics as the most missed on the Grade IV Water Distribution Operator Exam:

- ◆ Water Quality
- ◆ Safety
- ◆ Utility Management

Southern Nevada had the following topics as the most missed on the Grade IV Water Distribution Operator Exam:

- ◆ Water Quality
- ◆ Distribution System Operation
- ◆ Disinfection

Recommendations

This analysis is done to identify the deficiencies in each region for educational information only. The results should show a lack of knowledge in the areas of Water Quality, Distribution System Operations and Safety. The books we recommend for these areas are:

1. **Water Quality** (*Principles and Practices of Water Supply Operations*)
2. **Water Transmission and Distribution** (*Principles and Practices of Water Supply Operations*)
3. **Water Distribution Operators Training Handbook**
4. **Safety Practice for Water Utilities (M3)**

All books can be purchased at AWWA, California-Nevada Section, 10574 Acacia St., Ste D-6 Rancho Cucamonga, CA 91730 909-481-7200

We hope this will assist in providing the necessary information to educational providers.

